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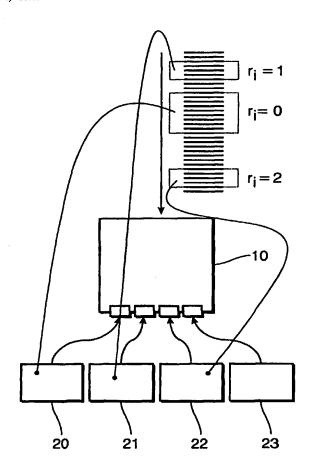
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(54) Title: AUTOMATIC TASK DISTRIBUTION IN SCALABLE PROCESSORS



(57) Abstract: The present invention relates to a processing method and apparatus for processing an information based on a sequence of instructions, wherein a repeated sub-sequence is detected in the sequence of instructions and an allocation between a processing resource and said repeated sub-sequence is determined based on an index information indicating the repetition frequency of the repeated sub-sequence. Thus, a combination of a scalable signal processor with automatic task distribution is provided, by means of which the number of memory accesses can be reduced, as the repeated sub-sequence can be allocated to external processing units, which are correspondingly programmed or which use their embedded memory. This also saves power.

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B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

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	ENTS CONSIDERED TO BE RELEVANT	Balancata dalah Na	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to daim No.	
X	US 2002/029357 A1 (CHARNELL WILLIAM THOMAS ET AL) 7 March 2002 (2002-03-07) paragraph '0430! - paragraph '0431!	1,12	
A	US 5 963 972 A (CALDER BRADLEY GENE ET AL) 5 October 1999 (1999-10-05) column 3, line 46 - line 54 column 6, line 1 - line 4 column 10, line 23 - line 56	1,12	
Α	US 5 457 799 A (SRIVASTAVA AMITABH) 10 October 1995 (1995-10-10) column 4, line 45 - line 62		

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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Authorized officer Moraiti, M

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n patent family members

PCT/IB 03/01399

US 2002029357 A1 07-03-2002 AU 2846999 A 05-06-2000 EP 1208425 A2 29-05-2002 W0 0029937 A2 25-05-2000 JP 2003526135 T 02-09-2003 US 2002165848 A1 07-11-2002 US 2002104077 A1 01-08-2002 US 2002042807 A1 11-04-2002 US 2002112227 A1 15-08-2002 US 2002108106 A1 08-08-2002 US 2002108107 A1 08-08-2002 US 2002032822 A1 14-03-2002 US 2002049865 A1 25-04-2002 US 2002049865 A1 25-04-2002 US 2002040470 A1 04-04-2002 US 2002040470 A1 14-03-2002 US 2002032719 A1 14-03-2002 US 2002032719 A1 14-03-2002	Patent document cited in search report		Publication date	Patent family member(s)		Publication date
	US 2002029357	A1	07-03-2002	EP UP US US US US US US US	1208425 A2 0029937 A2 2003526135 T 2002165848 A1 2002104077 A1 2002042807 A1 2002112227 A1 2002108106 A1 2002108107 A1 2002032822 A1 2002049865 A1 2002040470 A1	29-05-2002 25-05-2000 02-09-2003 07-11-2002 01-08-2002 11-04-2002 15-08-2002 08-08-2002 08-08-2002 14-03-2002 25-04-2002 04-04-2002
US 5457799 A 10-10-1995 NONE	US 5963972	Α	05-10-1999	NONE	E	
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